

## REMARKS

Claims 1-3, 5 and 8 are pending in the present application. Claim 8 has been incorporated into Claim 1. Claims 2 and 8 have been canceled.

### Rejection under 35 U.S.C. §112

Claims 1-3, 5 and 8 stand rejected under 35 U.S.C. §112 as indefinite. Applicants traverse the rejection. The term “ionic liquid” is a technical term for one of ordinary skill in the art. For support and clarification, Applicant attaches References 1 through 6.

The compounds described in amended claim 1 are in liquid form at ambient temperature. For example, the attached Reference 1 and Reference 2 show that the compounds described in the amended claim are in liquid form at ambient temperature. Reference 1 is a product catalog of Toyo Gosei Co., LTD. and Reference 2 is “Supervisor: Hiroyuki Ohno, Title: Ionic Liquids – The Front and Future of Material Development-, page 66-67 (2003). And the melting points of the compound used in Examples of the present specification are described in the table on the second page of Reference 1, and in the table on page 67 of Reference 2. Herein, “T<sub>m</sub>” is a melting point in the table on page 67 of Reference 2.

Specifically, the melting point of EMITFSI is -15°C (please see the third compound from the top in the table on the second page of Reference 1), the melting point of BMITFSI is -5°C (please see the sixth compound from the top in the table on the second page of Reference 1), the melting point of BPTFSI is 26°C (please see the fourth compound from the top in the table on page 67 of Reference 2), the melting point of P<sub>14</sub>TFSI is -18°C (please see the tenth compound from the top in the table on the second page of Reference 1, P<sub>14</sub>TFSI is described as “BMPTFSI”), and the melting point of EMIBF<sub>4</sub> is 13°C (please see the first compound from the top in the table on the second page of Reference 1).

In light of these references and the cancellation of claims 2 and 8, the term “ionic liquid” does not render the claims indefinite and the rejection should be withdrawn.

### **Rejection under 35 U.S.C. §103 (a)**

Claims 1-3, 5 and 8 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent 6,283,903 to Onuki, et al. The Examiner has reiterated his rejection of October 4, 2007. Applicants respectfully disagree.

An “Ionic liquid” is an unusual and special compound which has unusual and special properties, such as being in liquid form at ambient temperature. It can be seen the “ionic liquid” is the unusual and special compound, from the fact that a Research Association is devoted to their study there are the isolated an Association (Reference 3), Research for Priority Area (Reference 4), Symposium (Reference 5), a theme of the society (“I” on the fourth page of Reference 6), and so on. Therefore, “ionic liquid” is completely distinguished from a cationic surfactant, conducting agent, or conductive plasticizer described in Onuki. Accordingly, the ionic liquid of the present invention is not obvious from a cationic surfactant, conducting agent, or conductive plasticizer disclosed in Onuki. Thus, the present invention should not be rejected over Onuki.

In addition, the cation of a cationic surfactant generally has a long-chain alkyl group, and the long-chain alkyl group is the aliphatic hydrocarbon group which has at least 10 carbon atoms. However, the ionic liquid described in presently amended claim 1 has a C1-C8 alkyl group. Therefore, the ionic liquid described in amended claim 1 is not cationic surfactant as described in Onuki.

Furthermore, “the solid conducting agent” in the Office Action seems to point to “inorganic ionic substances such as lithium perchlorate and calcium perchlorate” and so on in Onuki, and the melting points of “inorganic ionic substances such as lithium perchlorate and calcium perchlorate” and so on in Onuki, which are several hundred degrees. Therefore, the solid conducting agents in Onuki are clearly not ionic liquids. In addition, if “the solid conducting agent” is dispersed and/or dissolved in a liquid, the product is not an “ionic liquid” which is a single material but the mixture of the solid conducting agent and the liquid.

U.S. Patent Application No.: 10/734,021  
Filing Date: 10 December 2003  
First Named Inventor: Hidetoshi AOKI

Moreover, in Onuki, there is no description of which compound consists of “conductive plasticizer.” Therefore, the ionic liquid of the present invention is not obvious from “conductive plasticizer” of Onuki.

U.S. Patent Application No.: 10/734,021  
Filing Date: 10 December 2003  
First Named Inventor: Hidetoshi AOKI

### **Conclusion**

Based on the Amendments and Remarks above, Applicant respectfully requests allowance of claims 1, 3, and 5.

Respectfully submitted,  
GOMEZ INTERNATIONAL PATENT OFFICE, LLC

Dated: 2 September 2008

By: /Brian A. Gomez/  
Brian A. Gomez  
Reg. No. 44,718  
1501 N. Rodney Street, Suite 101  
Wilmington, DE 19806  
Tel: (302) 351-3323  
Fax: (302) 351-8456  
E-mail: bgomez@gomez-ipo.com  
Attorney for Applicants